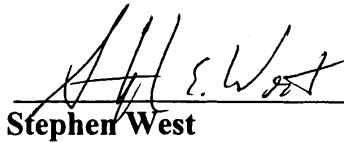


**MUNICIPAL  
WASTEWATER LAND APPLICATION PERMIT  
LA-000060-03  
City of Kuna**

**The City of Kuna, P.O. Box 13, Kuna, ID 83634, IS HEREBY  
AUTHORIZED TO CONSTRUCT, INSTALL AND OPERATE A  
WASTEWATER-LAND APPLICATION TREATMENT SYSTEM IN  
ACCORDANCE WITH THE WASTEWATER-LAND APPLICATION  
RULES (IDAPA 58.01.17), THE WATER QUALITY STANDARDS  
AND WASTEWATER TREATMENT REQUIREMENTS (IDAPA  
58.01.02), AND THE GROUND WATER QUALITY RULE (IDAPA  
58.01.11) AND ACCOMPANYING PERMIT APPENDICES AND  
REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM  
THE DATE OF SIGNATURE AND EXPIRES ON **March 27, 2007**.**



**Stephen West  
Boise Regional Office Administrator  
Idaho Department of Environmental Quality**

Signed this 27 day

of March, 2007

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

1445 North Orchard, Idaho 83706-2239

(208) 373-0550

(208) 373-0287 fax

**POSTING ON SITE RECOMMENDED**

## **B. Permit Contents and Reference Documents**

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The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater-Land Application Permit and are enforceable as such. This permit does not relieve the permittee from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

## C. Facility Information

<b>Legal Name of Permittee</b>	City of Kuna
<b>Type of Wastewater</b>	Municipal Wastewater
<b>Method of Treatment</b>	Aerated and Facultative Lagoons, Slow Rate Land Treatment
<b>Type of Facility</b>	Municipal
<b>Site Acres</b>	132 acres (existing 2001) 396 acres (future expansion) Note: Expansion areas require DEQ review and approval of irrigation delivery systems prior to construction. In addition, Compliance Activity CA-060-04 must be completed prior to using the abandoned feedlot area.
<b>Facility Location</b>	Kuna, Idaho
<b>Legal Location</b>	T1N, R1W, Sections 1 and 2
<b>County</b>	Ada
<b>USGS Quad</b>	Kuna
<b>Soils on Site</b>	Power silt loam, McCain silt loam
<b>Depth to Ground Water</b>	178 to 245 feet based on area well logs
<b>Beneficial Uses of Ground Water</b>	Agricultural, Drinking water
<b>Nearest Surface Water</b>	Mora Canal located approximately 1 mile north of land application areas
<b>Beneficial Uses of Surface Water</b>	Agriculture
<b>Facility Contact Person</b> <b>Mailing Address</b> <b>Phone/Fax Number</b>	Willard G. Nelson, Mayor City of Kuna P.O. Box 13 Kuna, Idaho 83634

**D. Site Map(s) - Due to large file size, site maps are posted as separate documents**

Figure 2 – Vicinity Map

Figure 3 – Existing Treatment Plant Site (Ponds No. 1 through 5)

Figure 4 – Existing Land Application Site (132-acre site)

Figure 6 – Overall Treatment and Land Application Facility (10-pond system and 396-acre land application site). Note pond no. 6 was installed in 2001.

**E. Environmental Monitoring Serial Numbers**  
**Computerized Data Reporting Serial Number Key**

<b>HYDRAULIC MANAGEMENT UNITS</b>		
<b>Description</b>	<b>Acres</b>	<b>Serial No.</b>
Field 1, 132-acre site	132	MU-006002
Field 2, 54-acre site, north field, west of pond system	54	MU-006004
Field 3, 61-acre site, south field, west of pond system	61	MU-006005
Field 4, 33-acre site, south of pond system	33	MU-006006
Field 5, 40-acre site, south of field 3 and 4	40	MU-006007
Field 6, 38-acre site, south of field 4	38	MU-006008
Field 7, 38-acre site, south of field 6	38	MU-006009

Note: MU-006003 intentionally not used

<b>WASTEWATER SAMPLING POINTS</b>	
<b>Description</b>	<b>Serial No.</b>
Discharge point of wastewater to land application, existing 2001	WW-006001
Discharge point of wastewater to land application, future (if necessary)	WW-006002

<b>LAGOONS</b>	
<b>Description</b>	<b>Serial No.</b>
Aerated Lagoon No. 1	LG-006001
Facultative/Storage Lagoon No. 2	LG-006002
Facultative/Storage Lagoon No. 3	LG-006003
Facultative/Storage Lagoon No. 4	LG-006004
Facultative/Storage Lagoon No. 5	LG-006005
Facultative/Storage Lagoon No. 6	LG-006006
Future lagoon	LG-006007
Future lagoon	LG-006008
Future lagoon	LG-006009
Future lagoon	LG-006010

**E. Environmental Monitoring Serial Numbers**  
**Computerized Data Reporting Serial Number Key**

<b>SOIL MONITORING UNITS</b>		
<b>Description</b>	<b>Associated Hydraulic Unit</b>	<b>Serial No.</b>
Field 1, 132-acre site	MU-006002	SU-006003
Field 2, 54-acre site	MU-006004	SU-006004
Field 3, 61-acre site	MU-006005	SU-006005
Field 4, 33-acre site	MU-006006	SU-006006
Field 5, 40-acre site	MU-006007	SU-006007
Field 6, 38-acre site	MU-006008	SU-006008
Field 7, 38-acre site	MU-006009	SU-006009

<b>GROUND WATER MONITORING POINTS</b>	
<b>Description</b>	<b>Serial No.</b>
Process Water Well	GW-006003

## **F. Reference Documents Incorporated or to be Incorporated into the Permit**

1. Operation and Maintenance Manual (Plan of Operation), refer to Section L, no. 1
2. Land Application Site Operator Lease
3. Waste Solids Management Plan

## G. Compliance Schedule for Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the DEQ in writing.

<b>Compliance Activity Number Completion Date</b>	<b>Compliance Activity Description</b>
<b>CA-060-01</b> As specified	The Noble domestic well shall be abandoned in accordance with applicable regulatory requirements prior to wastewater land application on the site of the well.
<b>CA-060-02</b> March 31, 2002	Submit a draft copy of the lease with the system operator to DEQ for review and comment.  The final signed lease, approved by DEQ, shall be incorporated by reference into this permit and shall be enforceable as a part of this permit.
<b>CA-060-03</b> As specified	Plans and specifications shall be submitted to DEQ for review and approval prior to construction of all wastewater treatment facilities, including wastewater irrigation delivery facilities.
<b>CA-060-04</b> As specified	Prior to utilizing any portion of the feed lot area (identified in Figure 6) for land application, the permittee shall obtain written DEQ approval. DEQ will use soil nutrient levels to determine when this area is suitable for land application.
<b>CA-060-05</b> As specified	Submit a Waste Solids Management Plan to DEQ for review and approval for all waste solids, including the management of solids located at the feed lot area. The Plan shall address how the requirements of section L, No. 6 will be satisfied.

## H. Special Conditions

The following Special Conditions are additions and/or modifications to the Standard Conditions and Limits in this permit. The individual Special Conditions will state which Standard Condition or Limit is to be modified, and what that modification is. Additions will simply state what the addition is.

1. Modification: Section I. Standard Permit Limits and Conditions, Application Season, page 10  
**The Growing Season for this permit is March 1 through October 31, 245 days**
2. Addition: Section I. Standard Permit Limits and Conditions, Non-Growing Season (NGS) Hydraulic Allowance  
**NGS hydraulic application rate of up to 4.74 inches or 17 million gallons is allowed during the NGS (November 1 through the end of February) on Field 1 (MU-0006002, 132 acres). No NGS application is allowed on any other fields.**
3. Addition: Section I. Standard Permit Limits and Conditions, Fencing Requirements  
**Fencing shall be provided around the wastewater treatment facilities and land application areas.**
4. Addition: Section I. Standard Permit Limits and Conditions, Lagoon Seepage Rate Testing  
**Each wastewater lagoon shall be tested for seepage rates at a minimum frequency of every 5 years and test results shall be submitted to DEQ.**
5. Modification: Section I. Standard Permit Limits and Conditions, Buffer Zone Distances, page 11  
**The disinfection level of 23/100 ml and the associated monitoring requirements will apply in this permit. The public access buffer zone shall apply to public roads only. All other buffer zones for this category shall apply.**
6. Addition: Section J. Standard Monitoring Requirements  
**Measure and report the volume of supplemental irrigation water applied to each Hydraulic Management Unit in Gallons/Month and acre-inches/month.**
7. Addition: Section J. Standard Monitoring Requirements  
**The Process Water Well shall be sampled on an annual basis in July for the following parameters: Total Dissolved Solids, chloride, and fecal coliform**
8. Modification: Section K. Reporting Requirements, page 14  
**The reporting period for the annual report is modified to reflect the growing and non-growing seasons. The annual report period shall cover the previous reporting year from November 1 through October 31. The due date of the report shall remain January 31 of the following year.**

## I. Standard Permit Limits and Conditions

- 1) The Permittee is allowed to apply wastewater and treat it on a land application site as prescribed in the tables below and in accordance with all other applicable permit conditions and schedules.
- 2) See also Special Conditions.

Category	Permitted Limits and Conditions
<b>Type of Wastewater</b>	Municipal Wastewater
<b>Application Site Area</b>	Slow Rate Irrigation
<b>Application Season</b>	Growing Season only, May 1 - October 31
<b>Maximum Hydraulic Loading Rate, Growing Season (includes wastewater and supplemental irrigation water, if used)</b>	<p>Growing Season (GS) Hydraulic Loading Rate shall be no greater than the Irrigation Water Requirement (IWR) using data from the tables of the following University Of Idaho web site:  <a href="http://www.kimberly.uidaho.edu/water/appndxet/index.shtml">http://www.kimberly.uidaho.edu/water/appndxet/index.shtml</a>. IWR is equal to the Mean IR data from these tables divided by the irrigation system efficiency. The numbers in these tables need to be converted to inches.</p> <p>In lieu of these tables, current climatic and evaporation data, or 30-year average data may be used to calculate the IWR, as defined in the 1994 Technical Interpretive Supplement, pages IV-6 and IV-7. Assume no carryover soil moisture and a leaching rate of zero in calculating the IWR.</p> <p>Application shall generally follow consumptive use rates for the crop throughout the season.</p>
<b>Down gradient ground water</b>	Ground Water Quality shall be in compliance with <i>Idaho Ground Water Quality Rule</i> IDAPA 58.01.11
<b>COD application rate</b>	50 pounds/acre/day (Seasonal average)
<b>Maximum Nitrogen Application Rate – from all sources</b>	125% of crop uptake, or UI Fertility Guide
<b>Maximum Phosphorus Application Rate – from all sources</b>	125% of crop uptake, or UI Fertility Guide
<b>Grazing</b>	Grazing is allowed only in conformance with DEQ approved grazing management plan.
<b>Allowable crops</b>	Crops grown for direct human consumption are not allowed
<b>Signing</b>	Signs shall be posted every 500 feet designating the fields as wastewater reuse areas or equivalent

## I. Standard Permit Limits and Conditions

<b>Buffer Zone Distances, feet (based on sprinkler irrigation)</b>	<b>Disinfection Level* (total coliform)</b>	<b>Distance to Public Access</b>	<b>Distances to Inhabited Dwellings</b>	<b>Distance to streams</b>	<b>Distance to private Water Sources</b>	<b>Distance to public water sources</b>	<b>Single sample maximum total coliform level</b>
	2.2 /100 ml	0	100	50	500	1,000	23/100 ml
	23/100 ml	50	300	50	500	1,000	240/100ml
	230/100ml	300	1,000	50	500	1,000	2400/100ml

\*Compliance determination method for disinfection requirements is as follows:

- For determining compliance with the 2.2/100 ml disinfection level, the median value of the last five (5) results must not exceed 2.2/100 ml. In addition, no single sample value shall exceed 23/100 ml.
- For determining compliance with the 23/100 ml disinfection level, the median value of the last five (5) results must not exceed 23/100 ml. In addition, no single sample value shall exceed 240/100 ml.
- For determining compliance with the 230/100 ml disinfection level, the median value of the last three (3) results must not exceed 230/100 ml. In addition, no single sample value shall exceed 2400/100 ml.

## J. Standard Monitoring Requirements

- 1) Appropriate analytical methods, as given in the *Handbook for Land Application of Municipal and Industrial Wastewater, April 1996*, or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the Operation and Maintenance Manual.
- 2) The permittee shall monitor and measure parameters as stated in the Facility Monitoring Schedule in this section. Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
- 3) Monitoring locations are described in Section E. Environmental Monitoring Serial Numbers.
- 4) Monitoring is required at the frequency shown in the table below if wastewater is applied anytime during the time period shown.
- 5) If the soil management unit is less than 15 acres, use 5 sub-samples. If the soil management unit is greater than 15 acres, use 10 sub-samples.
- 6) Five (5) soil sample locations shall be selected for each management unit. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches. The soil samples collected at 0-12 inches from each sample location shall be composited. Similarly, all soil samples collected at 12-24 inches shall be composited and all soil samples collected at 24-36 inches shall be composited. This method will yield three samples for analysis, one for 0-12 inches, one for 12-24 inches and one for 24-36 inches for each soil management unit.
- 7) Ground water monitoring wells shall be purged a minimum of three (3) casing volumes prior to obtaining a sample of ground water. The static water level shall be measured prior to pumping or sampling the ground water.

### Facility Monitoring Schedule

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Monthly (when land applying)	Discharge Point of Wastewater to Land Application	Volume of Wastewater land applied	Gallons/Month and acre-inches/month applied to each Hydraulic Management Unit
Monthly (when land applying)	Discharge Point of Wastewater to Land Application	grab sample	Total Kjeldahl nitrogen, nitrate+nitrite-nitrogen, TDS, pH, COD, total phosphorus
<u>During Application Season</u> For total coliform, monitoring frequency depends on level of treatment. 1. 2.2 / 100 ml. - Twice Weekly 2. 23 / 100 ml. – Weekly 3. 230 / 100 ml. - Twice Monthly	Discharge Point of Wastewater to Land Application	grab sample	Total Coliform
Annually in November	Soil Monitoring unit	Composite soil sample	E. C., nitrate-N, ammonia-N, P-available, pH
First year of permit only	Soil Monitoring unit	Composite soil sample	SAR, DTPA-FE, DTPA-Mn
Annually	Hydraulic management unit	Acres used for land application	Acres

## J. Standard Monitoring Requirements

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Annually	Hydraulic management unit	COD loading calculation	COD applied in lbs/acre/day
Annually	Hydraulic management unit	Total nitrogen and phosphorus load from fertilizer or all other non-wastewater application	Nitrogen and phosphorus applied in lbs/acre/year
Annually	Hydraulic management unit	Total nitrogen and phosphorus loading calculation from wastewater	Nitrogen and phosphorus applied in lbs/acre/year
Annually	Hydraulic management unit	Crop Yield Calculation and Crop Type	tons/acre, lbs/acre, or bushels/acre,
Annually	Hydraulic management unit	Crop Nutrient Uptake from Crop Tissue Analysis or from standard tables for Crop Type and yield.	Nitrogen and phosphorus uptake in lbs/acre/year
Annually	Hydraulic management unit	Irrigation Water Requirement for Crop Grown	Volume (inches / acre and total gallons) for each month for GS.

## **K. Reporting Requirements**

The permittee shall submit an Annual Wastewater-Land Application Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year which shall cover the previous year from January 1 through December 31. The Annual Report shall include results for monitoring required in Section E, status of compliance activities, and an interpretive discussion of monitoring data (ground water, vadose zone, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.

## L. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater-Land Application Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site unless permission has been obtained from the DEQ authorizing a discharge into the waters of the State as stated in IDAPA 58.01.02.600.02.
3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.02.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
  - a. Apply wastewater as evenly as practicable to the treatment area;
  - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
  - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. As a result of the land application of wastewater, ground water of the state must not contain contaminants exceeding those values as referenced under IDAPA 58.01.11.200a, b and c of the *Ground Water Quality Rule*, unless otherwise specified in this permit.
5. The permittee shall:
  - a. Manage the wastewater land application treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
  - b. Not hydraulically overload any particular areas of the wastewater land application treatment site.
6. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
7. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Waste Water Land Application Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.
8. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
  - a. Enter the permitted facility,
  - b. Inspect any records that must be kept under the conditions of the permit.
  - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
  - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
9. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
  - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
  - b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.

## **L. Standard Permit Conditions: Procedures and Reporting**

- c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Regional Office: see Permit Certificate Page  
Emergency 24 Hour Number 1-800-632-8000

- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any on-compliance unless extended by the DEQ. This report shall contain:
    - i. A description of the non-compliance and its cause;
    - ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
    - iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.
  - e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
10. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
11. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

## **M. Standard Permit Conditions: Modifications, Violations, and Revocations**

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in G. Reporting Requirements, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
5. Any person violating any provision of the Waste Water Land Application Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Land Application Permit Regulations.
7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within twenty (20) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Director.
8. The Director shall notify the permittee in writing of any revocation hearing at least twenty (20) days prior to the date set for such hearing. The hearing shall be conducted in accordance with Title 67, Chapter 52, Idaho Code.
9. If, pursuant to Idaho Code § 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing the Director shall provide the permittee a revocation hearing and prior notice thereof. Such hearings shall be conducted in accordance with Title 67, Chapter 52, Idaho Code.
10. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
11. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted land application site from service. Prior to commencing site closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.